DOCUMENT RESUME

ED 407 763 EC 305 481

AUTHOR Braud, Lendell W.; Powell, Blair
TITLE The Nature and Extent of Learning Disabilities among Abused Males Living in Residential Treatment Facilities.
PUB DATE Feb 97
NOTE 11p.; Paper presented at the Learning Disability Association International Conference (Chicago, IL, February 19-22, 1997).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adolescents; *Child Abuse; Children; Elementary Secondary Education; *Emotional Disturbances; Incidence; Instructional Effectiveness; *Learning Disabilities; *Males; Phonetics; Psychomotor Skills; *Remedial Programs; *Residential Institutions; Visual Perception

ABSTRACT

A study was conducted of 70 abused males (ages 6-16) with emotional disturbances living in 6 residential facilities, to investigate the incidence of learning disabilities. Each participant received a battery of psychological, neuropsychological, personality, behavioral, and achievement tests. Results found: (1) the standard scores on all achievement and neuropsychological tests were significantly below intellectual potential and actual grade placement; (2) 10 boys who received remediation using a phonics reading program made significant increases on test scores; (3) 10 boys who received remedial sessions using a visual-perceptual motor remediation program made significant increases on test scores; (4) a high percentage of the subjects rated themselves as having attention deficit disorders; and (5) 87 percent of the subjects had learning disabilities. Appendices include test scores for the population and a comparison of the test scores of children rating themselves as having attention deficit disorders with children rating themselves as not having attention deficit disorders. (CR)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Lendell W. Braud, Ph.D.
Blair Powell, M.A.
12906 FM 2854
Conroe, Texas 77304

ED 407 763

THE NATURE AND EXTENT OF LEARNING DISABILITIES AMONG ABUSED MALES LIVING IN RESIDENTIAL TREATMENT FACILITIES

Abused children in the custody of Children's Protective Services (CPS) who are emotionally disturbed may be placed in a residential treatment facility for therapy. A battery of tests was administered to each resident on a yearly basis. A high percentage (87%) of these residents had learning disabilities. Data from the psychological evaluations of children at six residential treatment facilities were compiled to determine the nature and extent of learning disabilities in this population. Remedial materials were also tested with 20 residents.

The sample included 70 emotionally disturbed males living in six residential treatment facilities. This population included 37 African Americans, 21 Caucasians, 11 Hispanics and 1 Asian. Participants ranged in age from 9 to 16 years (*M* age = 14.4). Each participant received a battery of psychological, neuropsychological, personality, behavioral, and achievement tests. The administered tests included: Wechsler Intelligence Scale for Children-III (WISC-III), Bender Gestalt (B-G), Benton Visual Retention Test (BVRT), Wide-Range Achievement Test-3 (WRAT-3), Gray Oral Reading Test-3 (GORT-3), Wide Range Assessment of Memory and Learning (WRAML), McCarron Assessment of Neuromuscular Development (MAND), Multidimensional Self Concept Scale (MSCS), Manifest Anxiety Scale, Incomplete Sentence Blank, and a behavioral rating.

EC305481

The group's mean Wechsler-III Full Scale IQ was 98. The mean WISC-III IQ scales and subtest pattern are presented in Appendix A. The standard scores on all achievement and neuropsychological tests were significantly below intellectual potential and actual grade placement (Appendix B). The mean reading

BEST COPY AVAILABLE

standard score on the WRAT-3 was 87 ($p < .00001$). The mean spelling score was 85 ($p < .00001$) and the mean arithmetic score for the group was 84 ($p < .00001$). The mean reading quotient on the Gray Oral Reading Test-3 was 78 ($p < .00001$). The mean standard score on the Bender Gestalt was 80 ($p < .00001$).

Ten boys with a significant deficit on the Gray Oral Reading Test-3 were selected to comprise the reading experimental or treatment group. These boys were selected on the basis of two criteria. Their oral reading quotient score on the Gray was significantly below their Full Scale IQ. Secondly, they were expected to remain at the treatment facility for at least 1 year, allowing for post testing at the time of their next scheduled psychological evaluation. There were boys who had significant deficits on their oral reading quotient scores, but were not expected to remain at the facility for a year. Therefore, they received no remediation. However, at the time of the next scheduled psychological evaluation, six of these boys were still at the facility, and these comprised the control group.

The 10 experimental reading participants received remediation utilizing the "Hooked On Phonics" reading program. Remedial sessions were provided twice a week for 6-9 months. Each remedial session included at least 4 repetitions of the phonics cards and tape, followed by the reading of 5-10 pages in the accompanying book. The average session took approximately 20-30 minutes.

Ten boys with a significant deficit on the Bender Gestalt Test were selected to comprise the visual-perceptual motor experimental or treatment group. Again, these boys were selected on the basis of two criteria: a Bender standard score significantly below their Full Scale IQ and the fact that they were expected to remain at the treatment facility for at least a year allowing for post testing. At the time of the next scheduled psychological evaluation, there were six additional boys who had originally demonstrated a significant deficit on the Bender but had received no remediation. These six boys comprised the visual-perceptual motor control group. The 10 experimental participants received remedial sessions utilizing the Braud Visual-Perceptual Motor remediation program. Remedial sessions were provided twice a week for

6-9 months. At each session, the participant was asked to trace nine (9) transparencies which included 286 geometric designs, numbers, and cursive letters. The average tracing session took approximately 20 minutes.

Pretest and posttest dependent measures for experimental and control groups are presented in Appendix C. An independent *t* test was used to compare the pre-posttest difference scores of the experimental group with those of the control group. The experimental reading participants made statistically significant increases as compared to controls on their Gray Oral Reading Quotient scores ($p < .00001$), reading rate ($p < .0002$), reading accuracy ($p < .00001$), and reading comprehension ($p < .00001$) scores. The experimental visual-perceptual motor participants made statistically significant increases as compared to controls on their Bender Gestalt scores ($p < .00001$).

Several factors suggest that the learning disabilities (LD) in this population are similar to those found in other populations of LD children who are not abused and are, therefore, not merely associated with their emotional problems. First, the WISC-III subtest pattern (Appendix A) is similar to that found in other LD populations. The neuropsychological data also support this interpretation. The Neuromuscular Development Index (NDI) score of the MAND was used to compare several groups. Children with learning disabilities ($M = 77.33$) had significantly lower ($p < .0002$) NDI scores than children without learning disabilities ($M = 90.44$). In addition, children with a reading disability ($M = 75.83$) also exhibited significantly lower ($p < .008$) NDI scores that children without a reading disability ($M = 83.27$).

Seventy-seven percent of this population rated themselves as having attention deficit disorder or attention deficit hyperactivity disorder (ADD/ADHD). In order to determine if this high percentage had a basis in fact, the ADD/ADHD group ($N = 54$) was compared to the subjects that did not consider themselves to have this disorder (N-ADD/ADHD) on a variety of measures (Appendix D). The Freedom From Distractibility Factor Score (WISC-III) of the ADD/ADHD group (85.89) was significantly below

($p < .0002$) that of the N-ADD/ADHD group (98.50). The General Memory Index score of the Wide Range Assessment Of Memory and Learning (WRAML) for the ADD/ADHD group (83.00) was significantly below ($p < .0007$) that of the N-ADD/ADHD (96.31). In addition, the ADD/ADHD group had a significantly lower verbal memory ($p < .003$) and visual memory ($p < .0007$). However, when material was presented to the child four consecutive times, the memory of the ADD/ADHD group improved ($M = 100.17$). This finding appeared important since this is the technique used in presentation of material in the "Hooked On Phonics" program. Of the ADD/ADHD sample, 63% were presently or had previously been prescribed Ritalin.

On other tests, the ADD/ADHD group performed significantly lower than the N-ADD/ADHD group. Each participant's reading comprehension grade level score (GORT-3) was compared to his actual grade level yielding a difference score. The ADD/ADHD group's score was significantly lower ($p < .009$) The mean neuromuscular ability score (NDI) of the ADD/ADHD group was also significantly lower ($p < .002$) than the corresponding score of the N-ADD/ADHD group.

The results of this study indicate that abused males in residential treatment have a variety of severe problems that include emotional, behavioral, and academic aspects. The prevalence of ADD/ADHD (77%) among abused males in residential facilities needs to be addressed as a factor in their treatment. The high percentage of children in this population with learning disabilities (87%) demonstrates the need for self paced remedial programs in such settings.

APPENDIX A

WECHSLER INTELLIGENCE SCALE-III SCORES
FOR POPULATION

TEST SCORE	MEAN	SD
Full Scale IQ	98.31	11.78
Verbal Scale IQ	95.30	11.41
Performance Scale IQ	102.19	12.81
Verbal Comprehension Index	97.51	11.34
Perceptual Organization Index	106.51	12.15
Freedom From Distractibility Index	88.74	14.34
Processing Speed Index	90.64	16.96
Coding	7.31	3.44
Vocabulary	7.66	2.40
Arithmetic	7.77	2.54
Digit Span	8.01	3.15
Information	8.53	2.45
Symbol Search	8.93	3.92
Block Design	9.68	2.84
Mazes	10.60	3.39
Similarities	10.71	2.48
Comprehension	10.94	2.94
Object Assembly	10.97	2.86
Picture Arrangement	11.36	3.05
Picture Completion	11.99	2.68
Total $N = 70$		

APPENDIX B

COMPARISON OF ACHIEVEMENT TEST SCORES
AND VISUAL-PERCEPTUAL MOTOR SCORES
WITH FULL SCALE IQ OR ACTUAL
GRADE PLACEMENT

TEST	%	MEAN	SD	*t*	*p*
WISC-III Full Scale IQ		98.31	11.78		
Actual Grade Placement		8.48	1.79		
WIDE RANGE ACHIEVEMENT-3					
Reading	43%	86.53	19.00	6.29	< .00001
Spelling	49%	84.61	16.14	8.15	< .00001
Arithmetic	51%	84.36	13.89	11,38	< .00001
GRAY ORAL READING TEST-3					
Gray Oral Reading Quotient	56%	77.56	21.28	10.03	< .00001
Reading Rate Grade Equivalent	77%	5.43	2.90	9.95	< .00001
Reading Accuracy Grade Equivalent	61%	6.05	3.40	7.04	< .00001
Reading Comprehension Grade Equivalent	67%	6.30	3.88	5.39	< .00001
BENDER GESTALT Standard Score	49%	79.54	19.60	8.26	< .00001

Note: Percentage of Children Exhibiting a Standard Score Significantly Below FSIQ or a Grade Equivalent Score Significantly Below Actual Grade Placement

APPENDIX C

MEAN PRETEST, POSTTEST AND DIFFERENCE SCORES AND STATISTICAL COMPARISONS FOR READING AND VISUAL-PERCEPTUAL MOTOR EXPERIMENTAL AND CONTROL GROUPS.

TESTS and GROUPS	EXPERIMENTAL			CONTROLS			*t*	*p*
	Pre	Post ($n = 10$)	Diff.	Pre	Post ($n = 6$)	Diff.		
READING GROUPS								
Gray Oral Reading Test-3								
Oral Reading Quotient	60.10	90.30	+30.20	55.00	56.00	+1.00	7.46	<.00001
Reading Rate Grade Level	3.13	6.65	+3.52	2.53	2.87	+0.33	3.93	< .0002
Reading Accuracy Grade Level	3.16	7.56	+4.41	2.45	2.90	+0.45	6.29	<.00001
Reading Comprehension Grade Level	3.64	9.32	+5.68	2.52	3.00	+0.48	6.66	<.00001
VISUAL-PERCEPTUAL MOTOR GROUPS								
Bender - Gestalt Test	60.50	97.70	+37.20	59.50	61.17	+01.67	8.01	<.00001

APPENDIX D

COMPARISONS OF CHILDREN RATING THEMSELVES AS ADD/ADHD WITH CHILDREN RATING THEMSELVES AS NOT ADD/ADHD.

TEST	ADD/ADHD MEAN ($N = 54$)	N-ADD/ADHD MEAN ($N = 16$)	t	p
WISC-III				
Freedom From Distractibility Factor	85.89	98.50	3.30	< .0002
WRAML				
General Memory Index	83.00	96.31	3.59	< .0007
Verbal Memory Index	73.89	86.44	3.11	< .003
Visual Memory Index	86.04	100.81	3.59	< .0007
Learning Index	100.17	104.56	1.23	= .226 *ns*
MAND				
Neuromuscular Development Index	77.26	84.94	2.38	< .002
GRAY ORAL READING-3				
Reading Comprehension Grade Vs. Actual Grade Difference In Months	-30.69	-7.38	2.73	< .009

APPENDIX E

POPULATION MEANS FOR THE WIDE-RANGE ASSESSMENT OF MEMORY AND LEARNING AND THE McCARRON ASSESSMENT OF NEUROMUSCULAR DEVELOPMENT

TEST	MEAN (N = 70)
WIDE-RANGE ASSESSMENT OF MEMORY AND LEARNING	
General Memory Index	86.04
Verbal (Auditory) Memory Index	76.76
Visual Memory Index	89.41
Learning Index	101.17
McCARRON ASSESSMENT OF NEUROMUSCULAR DEVELOPMENT	
Neuromuscular Development Index	79.01
Muscle Power Factor	119.57
Bimanual Dexterity Factor	87.29
Kinesthetic Integration Factor	83.00
Persistent Control Factor	57.43
Fine Motor Mean	56.33
Gross Motor Mean	83.09
Left Hand Preference	82.58
Right Hand Preference	77.46
Finger-Nose Finger	2.43
Finger Tapping	2.87
Rod Slide	3.11
Stand On One Foot	5.86
Beads In Box	6.59
Nut And Bolt	6.94
Heel Toe Walking	7.53
Beads On Rod	8.71
Hand Strength	11.56
Jumping	14.03